

IN THE CLAIMS

Please amend the claims as follows:

Claim 1. (Currently Amended) A method of assembling an optical module, the method comprising the steps of:

~~measuring an outgoing angle of a light emitted from a light emitting element; and
orienting said light emitting element based on said outgoing angle~~

measuring a far field pattern (FFP) of a light output from at least one optical component configured to receive said light emitted from said light-emitting element; and
positioning said at least one optical component based on said FFP.

Claim 2. (Currently Amended) The method of claim 1, further comprising the steps of:

~~detecting a far field pattern (FFP) of a light output from at least one optical component configured to receive said light emitted from said light emitting element; and
positioning said at least one optical component based on said FFP~~
measuring an outgoing angle of said light emitted from a light-emitting element; and
orienting said light-emitting element based on said outgoing angle.

Claim 3. (Currently Amended) The method of claim 21, wherein the step of ~~detecting~~
measuring the FFP comprises ~~detecting~~ measuring at least one of a divergent angle and an axis of said light output from said at least one optical component.

Claim 4. (Original) The method of claim 3, wherein the step of positioning said at least one optical component is based on said at least one of said divergent angle and said axis.

Claim 5. (Currently Amended) The method of claim 21, further comprising the step of fixing the position of said at least one optical component after said positioning step.

Claim 6. (Original) The method of claim 5, wherein the step of fixing comprises welding said at least one optical component with a laser.

Claim 7. (Currently Amended) The method of claim 21, wherein: the step of detecting measuring the FFP of the light output from said at least one optical component comprises detecting measuring the FFP of the light output from a collimating lens configured to collimate the light emitted from said light-emitting element; and the step of positioning comprises positioning said collimating lens.

Claim 8. (Currently Amended) The method of claim 7, wherein: the step of detecting measuring the FFP of the light output from said at least one optical component comprises detecting measuring the FFP of the light output from a focusing lens configured to focus a collimated light output from said collimating lens; and the step of positioning comprises positioning said focusing lens.

Claim 9. (Currently Amended) The method of claim 21, further comprising the steps of: detecting measuring a near field pattern (NFP) of the light output from said at least one optical component; and positioning said at least one optical component based on said NFP, wherein the step of positioning based on said NFP is performed before the step of positioning based on said FFP.

Claims 10-17. (Canceled)

Claim 18. (Currently Amended) A system for assembling an optical module, the system comprising: ~~means for measuring an outgoing angle of a light emitted from a light emitting element; and means for orienting said light emitting element based on said outgoing angle~~ means for measuring a far field pattern (FFP) of a light output from at least one optical component configured to receive said light emitted from said light-emitting element; and means for positioning said at least one optical component based on said FFP.

Claim 19. (Currently Amended) The system of claim 18, further comprising: ~~means for detecting a far field pattern (FFP) of a light output from at least one optical component configured to receive said light emitted from said light-emitting element; and means for positioning said at least one optical component based on said FFP~~ means for measuring an outgoing angle of said light emitted from said light-emitting element; and means for orienting said light-emitting element based on said outgoing angle.

Claim 20. (Currently Amended) The system of claim ~~19~~18, wherein the means for detecting measuring the FFP comprises means for detecting measuring at least one of a divergent angle and an axis of said light output from said at least one optical component.

Claim 21. (Original) The system of claim 20, wherein the means for positioning is configured to position said at least one optical component based on said at least one of said divergent angle and said axis.

Claim 22. (Currently Amended) The system of claim ~~19~~18, further comprising means for fixing the position of said at least one optical component.

Claim 23. (Original) The system of claim 22, wherein the means for fixing comprises a means for welding said at least one optical component.

Claim 24. (Currently Amended) The system of claim 1918, wherein said at least one optical component comprises means for collimating the light emitted from said light-emitting element.

Claim 25. (Original) The system of claim 24, wherein said at least one optical component comprises means for focusing a collimated light output from said means for collimating.

Claim 26. (Currently Amended) The system of claim 1918, further comprising: means for detecting measuring a near field pattern (NFP) of the light output from said at least one optical component; and means for positioning said at least one optical component based on said NFP, wherein the means for positioning based on said NFP is configured to position said at least one optical component before the means for positioning based on said FFP positions said at least one optical component ~~based on said FFP~~.

Claims 27-34. (Canceled)

Claim 35. (Currently Amended) A system for assembling an optical module, the system comprising: a light-emitting element; at least one optical component configured to receive a light emitted from said light emitting element, a far field pattern (FFP) optical measurement system configured to measure an FFP of a light output from said light-emitting

~~element at least one optical component; and a stage configured to orient said light emitting element a holding mechanism configured to position said at least one optical component based on said FFP.~~

Claim 36. (Currently Amended) The system of claim 35, further comprising: ~~at least one optical component configured to receive said light emitted from said light emitting element a stage configured to orient said light emitting element~~, wherein the FFP optical measurement system is configured to measure an FFP of a light output from ~~said at least one optical component an outgoing angle of said light emitted from said light emitting element; and a holding mechanism configured to position said at least one optical component based on said FFP of said light output from said at least one optical component the stage is configured to orient said light emitting element based on said outgoing angle.~~

Claim 37. (Currently Amended) The system of claim 3635, wherein the FFP optical measurement system is configured to measure at least one of a divergent angle and an axis of said light output from said at least one optical component.

Claim 38. (Original) The system of claim 37, wherein the holding mechanism is configured to position said at least one optical component based on said at least one of said divergent angle and said axis.

Claim 39. (Currently Amended) The system of claim 3635, further comprising a fixing mechanism configured to fix the position of said at least one optical component.

Claim 40. (Original) The system of claim 39, wherein the fixing mechanism comprises a laser configured to weld said at least one optical component.

Claim 41. (Currently Amended) The system of claim 3635, wherein said at least one optical component comprises a collimating lens configured to collimate the light emitted from said light-emitting element.

Claim 42. (Original) The system of claim 41, wherein said at least one optical component comprises a focusing lens configured to focus a collimated light output from said collimating lens.

Claim 43. (Currently Amended) The system of claim 3635, further comprising: a near field pattern (NFP) optical measurement system configured to measure the NFP of the light output from said at least one optical component; and wherein the holding mechanism is configured to position said at least one optical component based on said NFP before positioning said at least one optical component based on said FFP.

Claim 44. (Original) The system of claim 43, further comprising an optical distributor configured to route said light from said at least one optical component to one of said FFP optical measurement system and said NFP optical measurement system.

Claim 45. (Amended) The system of claim 35 36, further comprising a controller configured to receive FFP data from of said outgoing angle from said FFP optical measurement system, and control said stage based on said FFP data.

Claim 46. (Currently Amended) The system of claim 3635, further comprising a controller configured to: receive FFP data from said FFP optical measurement system, and control said holding mechanism based on said FFP data.

Claim 47. (Original) The system of claim 46, further comprising a fixing mechanism configured to fix the position of said at least one optical component, and wherein the controller is further configured to control the fixing mechanism.

Claim 48. (Currently Amended) The system of claim 4643, ~~wherein the controller is~~ further comprising a controller configured to: receive near field pattern (NFP) data from a NFP optical measurement system, and control said holding mechanism based on said NFP data.

Claim 49. (Previously Amended) A system for assembling an optical module, the system comprising: a light-emitting element; at least one optical component configured to receive a light emitted from said light-emitting element; a far field pattern (FFP) optical measurement system configured to measure an FFP of a light output from said at least one optical component; and a holding mechanism configured to position said at least one optical component based only on said FFP.

Claim 50. (Original) The system of claim 49, wherein the FFP optical measurement system is configured to measure at least one of a divergent angle and an axis of said light output from said at least one optical component.

Claim 51. (Original) The system of claim 50, wherein the holding mechanism is configured to position said at least one optical component based on said at least one of said divergent angle and said axis.

Claim 52. (Original) The system of claim 49, further comprising a fixing mechanism configured to fix the position of said at least one optical component.

Claim 53. (Original) The system of claim 52, wherein the fixing mechanism comprises a laser configured to weld said at least one optical component.

Claim 54. (Original) The system of claim 49, wherein said at least one optical component comprises a collimating lens configured to collimate the light emitted from said light-emitting element.

Claim 55. (Original) The system of claim 54, wherein said at least one optical component comprises a focusing lens configured to focus a collimated light output from said collimating lens.

Claim 56. (Original) The system of claim 49, further comprising: a near field pattern (NFP) optical measurement system configured to measure the NFP of the light output from said at least one optical component; and wherein the holding mechanism is configured to position said at least one optical component based on said NFP before positioning said at least one optical component based on said FFP.

Claim 57. (Original) The system of claim 56, further comprising an optical distributor configured to route said light from said at least one optical component to one of said FFP optical measurement system and said NFP optical measurement system.

Claim 58. (Original) The system of claim 49, further comprising a controller configured to: receive FFP data from said FFP optical measurement system, and control said holding mechanism based on said FFP data.

Claim 59. (Original) The system of claim 58, further comprising: a fixing mechanism configured to fix the position of said at least one optical component, and wherein the controller is further configured to control the fixing mechanism.

Claim 60. (Currently Amended) The system of claim 58, further comprising a near field pattern (NFP) optical measurement system configured to measure the NFP of the light output from said at least one optical component; wherein the controller is further configured to: receive near field pattern (NFP) data from a the NFP optical measurement system, and control said holding mechanism based on said NFP data.

Claims 61-74. (Canceled)